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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,812	09/17/2001	James A. Hagan	ROC9-2001-0062-US1	8204

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James R. Nock
IBM Corporation, Dept. 917
3605 Highway 52 North
Rochester, MN 55901-7829

EXAMINER

OJINI, EZIAMARA ANTHONY

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/954,812

Applicant(s)

HAGAN ET AL.

Examiner

Anthony Ojini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Applicant's election of claims 1-20 without traverse and cancellation of claims 21-43 in Paper No. 5 is acknowledged.

Claim Rejections - 35 USC § 112

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1,15, lines 1,3, the expression a glass or ceramic disk is unclear which element applicant is referring to.

In claims 2-7,11-14,16-20, line 1, the expression a glass or ceramic disk is unclear which element applicant is referring to.

In claims 8, 9, lines 1,2, the expression a glass or ceramic disk is unclear which element applicant is referring to.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramoto (JP1005759) in view of Wang et al (5,447,466).

With respect to claims 1,3, Kuramoto (JP1005759) discloses a method for manufacturing a glass disc substrate comprising the steps of providing a glass disc (2) having a circumferential edge (25), loading the disc substrate to an edge finishing apparatus; and grinding the circumferential edge of the disc substrate in a non-ductile mode.

Kuramoto (JP1005759) fails to disclose step of coarse grinding the circumferential edge of the disc substrate in a ductile grinding regime.

Wang et al. disclose a method for manufacturing a ceramic disc substrate comprising the step of grinding the disc substrate in a ductile grinding regime.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide apparatus of Kuramoto (JP1005759) with the step of grinding a disc substrate in a ductile grinding regime in view of Wang et al so as to prevent fracture on the surface of the substrate disc.

With respect to claim 4, Kuramoto (JP1005759) discloses a disc that contains an outer circumferential edge and a central aperture defining an inner circumferential edge, and wherein grinding step is applied to both the outer circumferential edge and inner circumferential edge of the disc (see figs.1, 2).

With respect to claim 5, Kuramoto (JP1005759) discloses wherein the grinding step comprises grinding said edge with a formed grinding appliance conforming to an edge radius at said circumferential edge (see fig. 2).

With respect to claims 6,7, Kuramoto (JP1005759) fails to disclose optimum values as claimed by the applicant.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide apparatus of Kuramoto (JP1005759) with optimum values as claimed by the applicant, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 2,8,9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramoto in view of Wang et al. as applied to claim 1 above, and further in view of Bajorek.

With respect to claim 2, Kuramoto (JP1005759) fails to disclose the glass disc is a disk drive device that is a rotating magnetic disk drive data storage device and subsequently coated with a magnetic coating after grinding step.

Bojorek discloses glass disk drive device that is a rotating magnetic disk drive data storage device that is being subsequently coated with a magnetic coating after grinding step (see col. 2, lines 18-41 & figs. 10-11).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide apparatus of Kuramoto (JP1005759) with the step of grinding a disc substrate in a ductile grinding regime in view of Bajorek so as to prevent damage on the surface of the substrate disc.

With respect to claims 8,9, Kuramoto (JP1005759) fails to disclose the glass substrate is finished for installation in a disk drive data storage device without chemical strengthening of the disk substrate.

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Wang et al. disclose a glass disk that is not chemically strengthenable (see summary of the invention).

Bajorek discloses a glass substrate that is finished for installation in a disk drive data storage device (see col. 2, lines 18-41 & figs. 10-11).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide apparatus of Kuramoto (JP1005759) with a glass disc that is finished for installation in a disk drive data storage device and which is not chemically strengthenable in view of Bajorek and Wang et al. so as prevent fracture on the surface of the substrate disc.

Claims 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramoto in view of Wang et al. and Bajorek.

With respect to claim 10, please refer to claims 1,2,9 above.

With respect to claims 11,17, Kuramoto is discussed above; please refer to claim 1 above.

With respect to claims 12, 18, please refer to claim 2 above.

With respect to claims 13, 19, please refer to claim 4 above.

With respect to claims 14,20, please refer to claim 5 above.

With respect to claims 15,16, Kuramoto (JP1005759) discloses a method for manufacturing a glass disc substrate comprising the steps of providing a glass disc (2) having a circumferential edge (25), loading the disc substrate to an edge finishing

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apparatus; and grinding the circumferential edge of the disc substrate by application of grinding stones (a form of mechanical forces).

Kuramoto (JP1005759) fails to disclose the glass substrate is for use in a disk drive data storage device. Kuramoto also fails to disclose finishing step is being accomplished without chemical strengthening of the disk substrate.

Wang et al. disclose a glass disk that is not chemically strengthenable (see summary of the invention).

Bajorek discloses a glass substrate that is finished for installation in a disk drive data storage device (see col. 2, lines 18-41 & figs. 10-11).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide apparatus of Kuramoto (JP1005759) with a glass disc that is finished for installation in a disk drive data storage device and which is not chemically strengthenable in view of Bajorek and Wang et al. so as prevent fracture on the surface of the substrate disc.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Naoi, Micheletti, Shibata, Millay et al. disclose edge grinding apparatus respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Ojini whose telephone number is 703 305

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3768. The examiner can normally be reached on 7.30 to 5.00 Tuesday-Friday with every other Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 703 308 2687. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308 3590 for regular communications and 703 746 3277 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 1148.



Joseph J. Hail, III
Supervisory Patent Examiner
Technology Center 3700

ao
April 7, 2003